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Letter and Reply

IgA nephropathy combined with thin basement membrane nephropathy in children



To the Editor,

IgA Nephropathy (IgAN) and thin basement membrane nephropathy (TBMN) are the most common and important causes of persistent hematuria in childhood, and with great interest I have read the published article by Hwang et al [1] that appeared in a recent issue of *Kidney Research and Clinical Practice* entitled “Clinical manifestations of IgA nephropathy combined with thin glomerular basement membrane nephropathy in children”. In this study, the authors reported that TBMN is frequently combined with IgAN (15.8%) and that patients with mixed IgAN and TBMN have better renal pathology and less proteinuria compared to those with isolated IgAN.

I would like to point out several issues regarding this study. First of all, the coexistence of IgAN and TBMN was not clear because nonspecific focal basement membrane thinning may be associated with IgAN. A variety of methods are used to measure the glomerular basement membrane (GBM) thickness, and considerable variations can be produced during the preparation of electron microscopy specimen. Coleman et al [2] reported that some specimens from the patients with minimal change disease revealed an artefactual thinning of GBM. GBM thinning is also associated with some inherited defects. However, this study did not include the family history of hematuria.

Second, it is not reasonable to conclude that the combined thinning of GBM may have a better prognosis in patients with IgAN. Although the patients with mixed IgAN and TBMN have less proteinuria than those with isolated IgAN, the authors' conclusion was derived from their cross-sectional study, but not based on a longitudinal study design. Previous studies also had inconsistent results. Data from China show no significant differences in follow-up serum creatinine and estimated glomerular filtration rate between patients with IgAN and TBMN and those with isolated IgAN [3]. According to a review from Norby and Cosio [4], the combination of TBMN generally does not present a poor prognosis in glomerular diseases. Longitudinal studies are required to draw a conclusion about the significance of combined TBMN in IgAN.

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Conflicts of interest

None to declare

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In Reply:

Clinical manifestations of IgA nephropathy combined with thin glomerular basement membrane nephropathy

We appreciate your interest in our recent article. As you mentioned, thinning of glomerular basement membrane (GBM) can be observed in many situations such as IgA nephropathy (IgAN), minimal change disease, some forms of lupus glomerulonephritis [1] and even in normal children [2]. However, the GBM thinning in these children was focal. Diagnosis of thin basement membrane nephropathy (TBMN) is based on diffuse thinning of GBM and “diffuse” means > 50% of individual capillaries affected. As described in the methods section of this article, we used the criteria proposed by Yoshikawa et al [3].

Unfortunately, our study was retrospectively performed so that every patient's family history of hematuria or renal disease was not available.

Another concern was raised regarding the prognosis of patients with IgAN and TBMN. Because this study was cross-sectional, our results suggested the differences of clinical characteristics in each group at the point of renal biopsy. However, we also agree with your comment about the necessity for a long-term prospective study to compare the clinical manifestations and prognosis between two groups, IgAN with TBMN and isolated IgAN more accurately. In spite of these limitations, most previous studies analyzed the characteristics of patients with IgAN and TBMN based upon isolated TBMN, whereas our study has its significance in the context that we compare the clinical manifestations based on isolated IgAN.

Conflicts of interest

All contributing authors declare no conflict of interest.

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